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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,413	03/19/2004	Robert R. Atkinson	ITL.1111US (P18783)	7288

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EXAMINER	
HOFFBERG, ROBERT JOSEPH	
ART UNIT	**PAPER NUMBER**
2835	

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/804,413	ATKINSON, ROBERT R.	
	Examiner	Art Unit	
	Robert J. Hoffberg	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25, 27-32* is/are rejected.

7)☒ Claim(s) *26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 March 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

Specification

1. The disclosure is objected to because of the following informalities: The specification does not describe the purpose of the rectangular cross-section of the Rod, #26 as shown in Fig. 2, whereas the Rod is shown as having circular cross-section in all other drawings (on page 6, lines 3-11 shows cooperation between Fig. 11 and Fig. 2). The specification on page 5, lines 17-18, "retention element 16" should be "upper portion 24".

Appropriate correction is required.

Drawings

2. The drawings are objected to because of inconsistencies in the depiction of Rod, #26 cross-section of circular vs. rectangular. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as

either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 9-10 and 19-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The description fails to describe how the flanged end (#30) on the rod (#26) engages the releasable lock (#34. page 6, line 11) prevents rotation of the rod.

5. Claims 22-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The description fails to describe a pair of cammed members; it describes only a single clip, #38.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1-6, 11-16, 21-22, 25, 27-28 and 31-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Lin et al. (US 6,307,748).

With respect to Claim 1, Lin et al. teaches a method comprising: releasably (Col. 1, line 20 replacement) plugging (Fig. 1, #40) a heat sink assembly (Fig. 1, #80) into a printed circuit board (Fig. 1, #100).

With respect to Claim 2, Lin et al. further teaches a method including plugging an upper portion (Fig. 1, #40) into a lower portion (Fig. 1, #60), said upper portion coupled to said heat sink (Fig. 1, #80) and said lower portion coupled to a printed circuit board (Fig. 1, #100).

With respect to Claim 3, Lin et al. further teaches a method including telescopically (Fig. 5 and 6) plugging said upper portion into said lower portion.

With respect to Claim 4, Lin et al. further teaches a method including releasably plug locking portion (between Fig. 9, #68 and #72) said lower portion (Fig. 1, #60) in said printed circuit board (Fig. 1, #100).

With respect to Claim 5, Lin et al. further teaches a method including plugging said lower portion (Fig. 1, #60) into a hole (Fig. 1, #102) in said printed circuit board (Fig. 1, #100).

With respect to Claim 6, Lin et al. further teaches a method including engaging a catch (Fig. 8, #48 on bottom of #60) on said lower portion with a spring (Fig. 1, #50) biased rod (Fig. 1, #44) in said upper portion (Fig. 1, #40).

With respect to Claim 11, Lin et al. teaches a method comprising: arranging a heat sink assembly (Fig. 1, #80) to releasably (Col. 1, line 20 replacement) plug into a printed circuit board (Fig. 1, #100).

With respect to Claim 12, Lin et al. further teaches a method including making an upper portion (Fig. 1, #40) of said assembly into a lower portion (Fig. 1, #60) of said assembly, said upper portion connectable (see Fig. 9) to a heat sink and said lower portion connectable (see Fig. 9) to a printed circuit board.

With respect to Claim 13, Lin et al. further teaches a method including enabling said upper and lower portions to telescopically (Fig. 5 and 6) plug into one another.

With respect to Claim 14, Lin et al. further teaches a method including enabling said lower portion to releasably plug lock (between Fig. 9, #68 and #72) in a printed circuit board (Fig. 1, #100).

With respect to Claim 15, Lin et al. further teaches a method including enabling said lower portion (Fig. 1, #60) to plug into a hole (Fig. 1, #102) in a printed circuit board (Fig. 1, #100).

With respect to Claim 16, Lin et al. further teaches a method including enabling a spring (Fig. 1, #50) biased rod (Fig. 1, #44) in said upper portion (Fig. 1, #40) to engage a catch (Fig. 8, #48 on bottom of #60) on said lower portion (Fig. 1, #60).

With respect to Claim 21, Lin et al. teaches a heat sink assembly comprising: a telescoping (Fig. 5 and 6) first portion (Fig. 1, #40) to engage a printed circuit board (Fig. 1, #100); a telescoping (Fig. 5 and 6) second portion (Fig. 1, #60) to engage a heat sink (Fig. 1, #80) to be attached to said printed circuit board; and said first portion and said second portion releasably (Col. 1, line 20 replacement) locking together when said first portion is plugged into said second portion.

With respect to Claim 22 (as best understood), Lin et al. further teaches an assembly wherein said first portion (Fig. 1, #40) includes a pair of cammed members (Fig. 3, #723 on opposing sides) (interpreted based upon a pair of #38 instead of a single #38 disclosed) that deflect inwardly into said first portion when said first portion engages a printed circuit board (Fig. 1, #100) and snap outwardly after said first portion is plugged into said printed circuit board, releasably (Col. 4, line 10 disassembly) holding said first portion in said printed circuit board.

With respect to Claim 25, Lin et al. further teaches an assembly wherein said second portion (includes a tubular (having a round cylindrical shape) member (Fig. 1, #60) that slides within said first portion (Fig. 1, #40).

With respect to Claim 27, Lin et al. further teaches an assembly including a rod (Fig. 1, #44) reciprocatable within said tubular member, said rod having opposed ends, one of said ends (Fig. 1, #48) to engage the catches (Fig. 8, bottom of #60) in said first portion.

With respect to Claim 28, Lin et al. further teaches an assembly wherein said rod (Fig. 1, #44) is spring (Fig. 1, #50) biased.

With respect to Claim 31, Lin et al. further teaches an assembly including a heat sink (Fig. 1, #80) secured to said second portion (Fig. 1, #60).

With respect to Claim 32, Lin et al. further teaches an assembly including a printed circuit board (Fig. 1, #100) secured (see Fig. 9) to said first portion (Fig. 1, #40).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claim 7-10, 17-20, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US 6,307,748) as applied to claim 6 and 16 above, in view of Coules (US 4,007,516).

With respect to Claim 7, Lin et al. teaches the method of claim 6, above. Lin et al. does not teach releasing the catch by rotating the rod. Coules teaches releasing the catch (Col. 2, lines 54-58) by rotating the rod (Fig. 5, #36). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Lin et al. with that of Coules for the purpose of providing a quick means of releasing the catch.

With respect to Claim 8, Coules further teaches the method including preventing rotation (Fig. 3, #15) of said rod (Fig. 6, #36). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Lin

et al. with further that of Coules for the purpose of preventing unintentional disassembly of the fasteners.

With respect to Claim 9 (as best understood), Coules further teaches the method wherein preventing rotation (Fig. 3, #15) (based upon the slot in the catch preventing rotation) includes using a flanged end (Fig. 1, #14) on said rod (Fig. 6, #36) which engages a releasable (Col. 2, line 54) lock. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Lin et al. with feature that of Coules for the purpose of using a combination of elements to prevent rotation of the rod.

With respect to Claim 10 (as best understood), Coules further teaches the method including using an extending end (Fig. 1, #31) opposite said flanged end (Fig. 1, #14) said rod (Fig. 6, #36) to engage (Col. 2, line 29) said catch and to be released (Col. 2, lines 54-56) from said catch when said rod is rotated. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Lin et al. with feature that of Coules for the purpose of providing a feature to grip to rotate the rod.

With respect to Claim 17, Lin et al. teaches the method of claim 16, above. Lin et al. does not teach enabling said catch to be released by rotating said rod. Coules teaches the enabling said catch (Col. 2, lines 54-58) to be released by rotating said rod (Fig. 5, #36). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Lin et al. with that of Coules for the purpose of providing a quick means of releasing the catch.

With respect to Claim 18, Coules further teaches the method including providing a way to prevent rotation (Fig. 3, #15) of said rod (Fig. 6, #36). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Lin et al. with feature that of Coules for the purpose of preventing unintentional disassembly of the fasteners.

With respect to Claim 19 (as best understood), Coules further teaches the method including providing a flanged end (Fig. 1, #14) on said rod (Fig. 6, #36) to engage a releasable (Col. 2, line 54) lock to prevent rotation (Fig. 3, #15) (based upon the slot in the catch preventing rotation) of said rod. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Lin et al. with feature that of Coules for the purpose of using a combination of elements to prevent rotation of the rod.

With respect to Claim 20 (as best understood), Coules further teaches the method including providing an extending end (Fig. 1, #31) on said rod (Fig. 6, #36) opposite said flanged end (Fig. 1, #14) of said rod to engage (Col. 2, line 29) said catch and to be released (Col. 2, lines 54-56) from said catch when said rod is rotated. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Lin et al. with feature that of Coules for the purpose of providing means to grip and to rotate the rod.

With respect to Claim 29, Lin et al. teaches the method of claim 27, above. Lin et al. does not teach the free end of said rod to releasably engage said catches and to be releasable upon rotation of said rod. Coules teaches the free end (Fig. 6, #36 near #39)

of said rod (Fig. 6, #36) to releasably (Col. 2, line 54) engage said catches (Fig. 6, #39) and to be releasable upon rotation (Col. 2, line 56) of said rod. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of Lin et al. with that of Coules for the purpose of providing a feature to prevent disengagement of the rod.

With respect to Claim 30, Coules further teaches the upper surface of said tubular member of said second portion includes a locking member (Fig. 3, #15) to prevent rotation of said rod to release said free end of said rod from said catch in said first portion. Coules teaches that the first portion includes a locking member. While Coules shows the reversal of the first and second portions as to which portion includes the locking member, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the assembly of Lin et al. with the feature of Coules that addition of a locking member on either portion would prevent rotation and disengagement of the rod and to reverse the first and second portions, since it has been held that mere reversal of the essential working parts involves only routine skill in the art (see *In re Gazda*, 219 F.2d 449, 104 USPQ 400 (CCPA 1955) or In re Einstein, 8 USPQ 167).

10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US 6,307,748) as applied to claim 22 above, in view of Lin et al. (US 6,412,546).

With respect to Claim 23 (as best understood), Lin et al. ('748) teaches the assembly of claim 22, above. Lin et al. does not teach the feature that said first portion includes a pair of opposed L-shaped catch members. Lin et al. ('546) teaches the

assembly wherein said first portion (Fig. 2, #50) includes a pair of opposed L-shaped catch members (Fig. 3, between #624 and #628). Lin et al. ('546) teaches that the first portion slides into L-shaped catch members within the second portion. While Lin et al. ('546) shows the reversal of the first and second portion members as to which member includes a pair of opposed L-shaped catch members, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the assembly of Lin et al. ('748) with the feature of Lin et al. ('546) to providing L-shaped catch members on either portion to retain the flanged pin after it is snapped into place, since it has been held that mere reversal of the essential working parts involves only routine skill in the art (see *In re Gazda*, 219 F.2d 449, 104 USPQ 400 (CCPA 1955) or In re Einstein, 8 USPQ 167).

Allowable Subject Matter

11. Claim 26 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: Claim 26 is allowable over the art of record because the prior art does not teach or suggest that "the second portion to engage a printed circuit board is a tubular member includes threads to threadedly secure said second portion to engage a heat sink and slides within the first portion". The closest reference to present invention is believed to be Lin et al. (US 6,307,748). Lin et al. ('748) lacks the structure of threads to threadly secure the second portion to a heat sink.

12. Claim 24 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. The following is a statement of reasons for the indication of allowable subject matter: Claim 24 is allowable over the art of record because the prior art does not teach or suggest that "the first portion, includes a pair of cammed members to engage a printed circuit board, is cylindrical having a closed end and an open end, said open end to receive said second portion, said closed end mounting said pair of opposed L-shaped catches". The closest reference to present invention is believed to be Lin et al. (US 6,412,546). Lin et al ('546) lacks the structure a cup shaped member containing opposed L-shaped catches in the closed end.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Preziosi (US 3,220,078), Bisbing (US 4,047,266) and Settergren et al. (US 2003/0184948) teach rotary fasteners. Blankenburg (US 4,898,493), Petri (US 4,969,065), Cipolla et al. (US 5,586,005), Chou et al. (US 6,104,614), Lai (US 6,456,490), Chen et al. (US 6,752,577), Haiser (US 6,866,540), Morerke et al. (US 6,874,983), Aoki et al. (US 6,934,155) and Liu (US 2004/0052611) teach snap fasteners. Lee et al. (US 6,480,387), Perarson et al. (6,501,658), Lee et al. (US 6,611,431), Robertson (US 6,866,540) and Liu (US 2004/0052611) teach threaded fasteners.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Hoffberg whose telephone number is (571) 272-2761. The examiner can normally be reached on 8:30 AM - 4:30 PM Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RJH

ANATOLY VORTMAN
PRIMARY EXAMINER